

03-04-02

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1059 U.S. PTO  
03/01/02

Attorney Docket No. SAM-0130DIV  
PATENT

1059 U.S. PTO  
10/08/330  
03/01/02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BOX PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, D.C. 20231

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Kwang-Shik Shin, Kyu-Charn Park, Heung-Kwun Oh and Sung-Hoi Hur

For (title): NAND-TYPE FLASH MEMORY  
DEVICES AND METHODS OF  
FABRICATING THE SAME

1. **Type of Application** This new application is for  
a(n)

- ☐ Original (nonprovisional)  
☐ Design  
☐ Plant  
☒ Divisional.  
☐ Continuation.  
☐ Continuation-in-part (C-I-P).

2. **Benefit of Prior Application(s)**

- ☒ The new application being transmitted claims the benefit of prior U.S. patent application no.  
09/678,917, filed on October 4, 2000.

3. **Papers Enclosed**

- 16 Pages of specification  
5 Pages of claims  
1 Page of Abstract  
13 Sheets of drawings  
☒ formal  
☐ informal  
1 Page of Cover Sheet

- ☐ The **enclosed** drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT  
PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. 1.84(b).

**CERTIFICATE OF MAILING**

**37 C.F.R. § 1.10**

"Express Mail" Mailing Label Number EV058991397US  
I hereby certify that this paper or fee is being deposited with the  
United States Postal Service "Express Mail Post Office to  
Addressee" service under 37 CFR 1.10 on the date indicated above  
and is addressed to BOX PATENT APPLICATION, Assistant  
Commissioner for Patents, Washington, DC 20231.

Date: 3-1-02

Amy Green

Print Name

4. Additional papers enclosed

- ☐ Preliminary Amendment
- ☐ Information Disclosure Statement (37 C.F.R. 1.98)
- ☐ Form PTO-1449 (PTO/SB/08A and 08B)
- ☐ Copies of cited references
- ☐ Declaration of Biological Deposit
- ☐ Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.
- ☐ Authorization of Attorney(s) to Accept and Follow Instructions from Representative
- ☐ Special Comments
- ☒ Other: Return Postcard and Notice of Change in Power of Attorney and Correspondence Address.

5. Declaration or oath

- ☒ Enclosed
  - ☐ Unexecuted
  - ☒ Executed by
    - ☒ inventors. The enclosed Declaration is a true copy of the Declaration filed in U.S. patent application serial no. 09/678,917, the parent of the present divisional application.
    - ☐ legal representative of inventor(s).  
37 CFR 1.42 or 1.43.
    - ☐ joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
    - ☐ This is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached. See item 12 below for fee.
- ☐ Not Enclosed
- ☐ Application is made by a person authorized under 37 C.F.R. 1.41 (c) on behalf of all the above named inventor(s).
  - ☐ Showing that the filing is authorized.

6. Assignment

- ☐ An assignment of the invention to \_\_\_\_\_
  - ☐ is attached. A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.
  - ☐ will follow.

7. **Certified Copy**

Certified copy(ies) of application(s)

| Country | Appln. no. | Filed |
|---------|------------|-------|
|---------|------------|-------|

| Country | Appln. no. | Filed |
|---------|------------|-------|
|---------|------------|-------|

| Country | Appln. no. | Filed |
|---------|------------|-------|
|---------|------------|-------|

from which priority is claimed

☐ is (are) attached.

☐ will follow.

8. **Fee Calculation (37 C.F.R. 1.16)**

| CLAIMS AS FILED   |              |        |              |   |
|---|--------------|--------|--------------|---|
|   | Number filed |        | Number Extra | Rate  |
|   |              |        |              | Basic Fee<br>37 C.F.R. 1.16(a)<br><b>\$740.00</b> |
| Total   |              |        |              |   |
| Claims (37 CFR 1.16(c))                                 | 12           | - 20 = | 0            | \$ 18.00  |
| Independent   |              |        |              |   |
| Claims (37 CFR 1.16(b))                                 | 2            | - 3 =  | 0            | \$ 84.00  |
| Multiple dependent claim(s),<br>if any (37 CFR 1.16(d)) |              |        | +            | \$280.00  |

☐ Amendment canceling extra claims is enclosed.

☐ Amendment deleting multiple-dependencies is enclosed.

☐ Fee for extra claims is not being paid at this time.

Filing Fee Calculation

\$ 740.00

**9. Small Entity Statement(s)**

- ☐ Verified Statement(s) that this is a filing by a small entity under 37 CFR 1.9 and 1.27 is (are) attached.
- ☐ Status as a small entity was claimed in prior application \_\_\_\_\_, filed on \_\_\_\_\_ from which benefit is being claimed for this application under:
- 35 U.S.C. ☐ 119(e),  
☐ 120,  
☐ 121,  
☐ 365(c),
- and which status as a small entity is still proper and desired.
- ☐ A copy of the verified statement in the prior application is included.

**Filing Fee Calculation (50% of A, B or C above)**

\$ \_\_\_\_\_

**10. Fee Payment Being Made at This Time**

- ☐ Not Enclosed
- ☐ No filing fee is to be paid at this time.  
*(This and the surcharge required by 37 C.F.R. 1.16(e) can be paid subsequently.)*
- ☒ Enclosed
- ☒ Basic filing fee \$ 740.00
- ☒ Recording assignment  
(\$40.00; 37 C.F.R. 1.21(h))  
(See attached "COVER SHEET FOR ASSIGNMENT  
ACCOMPANYING NEW APPLICATION".) \$ 40.00

**Total fees enclosed** \$ 780.00

**11. Method of Payment of Fees**

- ☒ Checks in the amounts of \$ 740.00, 40.00
- ☐ Charge Account No. 50-1798 in the amount of \$ \_\_\_\_\_  
A duplicate of this transmittal is attached.

**12. Authorization to Charge Additional Fees**

☒ The Commissioner is hereby authorized to charge the following additional fees during the entire pendency of this application to Account No. 50-1798.

☒ 37 C.F.R. 1.16(a), (f) or (g) (filing fees)

☒ 37 C.F.R. 1.16(b), (c) and (d) (presentation of extra claims)

☐ 37 C.F.R. 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)

☐ 37 C.F.R. 1.17 (application processing fees)

☐ 37 C.F.R. 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. 1.311(b))

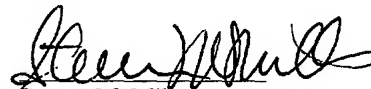
**13. Instructions as to Overpayment**

☒ Credit Account No. 50-1798

☐ Refund

Date: 3/1/02  
Mills & Onello LLP  
Eleven Beacon Street, Suite 605  
Boston, MA 02108  
Telephone: (617) 994-4900  
Facsimile: (617) 742-7774

Respectfully submitted,

  
Steven M. Mills  
Registration Number 36,610  
Attorney for Applicants

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

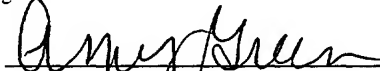
Applicant(s): Kwang-Shik Shin, et al.  
Filing Date: Herewith  
Serial No.: Divisional of U.S. Serial No. 09/678,917  
Title: NAND-TYPE FLASH MEMORY DEVICES AND METHODS OF  
FABRICATING THE SAME

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.10

"Express Mail" Mailing Label Number EV058991397US I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated below and is addressed to BOX PATENT APPLICATION, Assistant Commissioner for Patents, Washington, DC 20231.

3-1-02

Date

  
Amy Green

BOX PATENT APPLICATION  
Assistant Commissioner for Patents  
Washington, DC 20231

TRANSMITTAL LETTER

Sir:

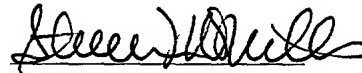
Enclosed herewith for filing in the above-identified patent application please find the following listed items:

1. New Application Transmittal;
2. New Divisional Patent Application;
3. Copy of Executed Declaration, Petition and Power of Attorney;
4. Thirteen (13) Sheets of Formal Drawings (Figures 1, 2A-2B, 3A-3B, 4A-4B, 5A-5B, 6A-6B, 7A-7B, 8A-8B, 9A-9B, 10A-10B, 11A-11B) ;
5. Notice of Change in Power of Attorney and Correspondence Address;
6. Check in the amount of \$740.00 to cover requisite fee; and
7. Return Postcard.

In connection with the foregoing matter, please charge any additional fees which may be due, or credit any overpayment, to Deposit Account Number 50-1798. A duplicate copy of this letter is provided for this purpose.

Respectfully submitted,

Date: 3/1/02  
Mills & Onello LLP  
Eleven Beacon Street, Suite 605  
Boston, MA 02108  
Telephone: (617) 994-4900  
Facsimile: (617) 742-7774  
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Steven M. Mills  
Registration Number 36,610  
Attorney for Applicants

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Shin, et al.

Examiner: Johnson, C.

Serial No.: 091678,917

Group Art Unit: 2822

Filing Date: October 4, 2000

Patent No:

Issue Date:

Title: NAND-Type Flash Memory Devices and Methods  
of Fabricating the Same

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Post Office as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington DC 20231.

September 26, 2001  
Date

Denise M. Donahue  
Denise Donahue

Assistant Commissioner for Patents  
Washington, DC 20231

TRANSMITTAL LETTER

Sir:

Enclosed herewith for filing in the above-identified patent application or issued patent please find the following listed items:

1. Copy of Power of Attorney by Assignee of Entire Interest with Revocation of Prior Powers and Certification under 37 C.F.R. 3.73(b) for a Plurality of Patent Applications and Patents; and
2. Return Postcard.

The original version of this paper is filed in the U.S. Patent and Trademark Office in the file of U.S. Patent Number 5,973,329, which issued on October 26, 1999. The public is therefore authorized to inspect and copy the original paper.

Respectfully submitted,

Date: Sept 26, 2001  
Mills & Onello, LLP  
Eleven Beacon Street, Suite 605  
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Telephone: (617) 994-4900, Ext. 4902  
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